II. EXPERT PANELS

Six expert panels provided stimulating highlights of innovations currently taking place today and gave their thoughts on possibilities for the future.

PANEL 1 – SECURITY I

MODERATOR
Joe Cox, Chamber of Shipping of America

COORDINATOR
Jean Godwin, American Association of Port Authorities

PANELISTS
Edward V. Badolato, CMS Inc.

CDR Stephen Flynn, Council on Foreign Relations and U.S. Coast Guard Academy

Kim Petersen, Maritime Security Council

SUMMARY OF PANEL PRESENTATIONS / DISCUSSION
Security is extremely critical to the maritime community because our ports are vulnerable. Much of that vulnerability is due to foreign traffic as a large number of foreign-flag vessels from a variety of countries enter our ports daily to deliver imported goods or pick-up export cargo. We cannot compromise security for profitability. The panel speakers addressed the United States' concern with security among port entities and aboard these vessels.

Edward Badolato
In his presentation, Edward Badolato talked about overall maritime security, with a particular emphasis on port security, and provided some background information on terrorist activities. He noted that ports serve not only as America's economic engine but also as its most vulnerable gateways around the country. The laxity of American seaports remains an open secret among criminals – ports are potential targets for terrorists like Osama bin Laden, who maintains a ship fleet under various registries and looks at maritime transfers. Consequently there is a strong need for research and technology to enhance both port physical security and transportation security. Mr. Badolato identified five key research and development areas: (1) coordination of indication and warning systems; (2) container tracking systems; (3) container locks and seals; (4) rapid non-intrusive detection for nuclear, biological, or chemical precursors and explosives; and (5) integration of security and intelligence systems. His vision for the future includes an increase in terrorists' transportation infrastructure activities. It will be extremely difficult for law enforcement officials to detect and disrupt covert cells, so the overhaul and audit of port security systems will continue to be important and growing areas.

CDR Stephen Flynn
CDR Stephen Flynn opened his presentation by talking about the consequences of the terrorist attack on 11 September. The events clearly demonstrated that terrorists not only have a global reach, but they also possess the means (potentially using chemical and biological weapons) and the desire to cause catastrophic damage. The relative ease by which these hijackers perpetuated such a horrific act,

combined with the societal and economic chaos that ensued, will serve to inspire further terrorism. The resulting rise and political recognition of the value of security offers an excellent opportunity to fix things to make the seaport transportation process more efficient but also more secure at the same time. CDR Flynn spoke in favor of "former reverse profiling" where the ultimate objective should be concentric layers of inspections which assure credibility and legitimacy. To accomplish this feat, he outlined a three-tier system. First, in point-of-origin controls, the private sector must reduce the risk that they will be compromised by a terrorist or criminal when they enter cargo or vessels into our transportation system. Then, as cargo moves from the loading system, it must have "in-transit visibility and accountability" so that a chain of custody is well maintained. In the final step, we must assess the credibility of owners and operators. The various stakeholders must work together to fuse information – we cannot afford to look at port security or maritime security as isolated from a transport network, but rather it is one big system.

Kim Petersen

In his presentation, Kim Petersen reiterated a common theme in this panel by stating that the ports and maritime industry are the most valuable components of our national infrastructure, but they are also the most vulnerable. The devastating events of 11 September demonstrated that it is incumbent upon not only the shipping communities, but also the ports to review, analyze, and implement improvements in their physical, personnel, and information security programs. As a country, we have not provided the ports with sufficient standards and guidelines how to properly protect themselves from these new types of threats. The private sector possesses the real expertise for maritime security – the government must form a partnership with industry to share information and technology. The ports need federal leadership not only in the execution of their security plans but also in financing to secure the ports with personnel, software and hardware upgrades in the years ahead. In doing so, we must proceed with foresight and restraint – otherwise, we may find ourselves with the most secure ports but we must shut down these ports because we simply cannot operate because of the onerous conditions placed upon them.

PANEL 2 – PORT CAPACITY

MODERATOR
Rex Edwards, Transportation Consultant

COORDINATOR
Joedy Cambridge, TRB / Marine Board

CHALLENGE SPEAKER
M. John Vickerman, TransSystems Corporation

PANELISTS
Jim Brennan, Norbridge Consulting

Asaf Ashar, National Ports and Waterways Institute, University of New Orleans

Lauren Kotas, Canaveral Port Authority and American Association of Port Authorities

James McCarville, Port of Pittsburgh

SUMMARY OF PANEL PRESENTATIONS / DISCUSSION
This panel discussed the importance of port capacity development to the MTS from the perspective of port operators and users. The key issue was whether current and projected port capacity can accommodate future freight flows, and what policies are necessary to meet that demand. Panel members included consulting engineers and researchers, as well as port management personnel.

M. John Vickerman
The Challenge Speaker was John Vickerman, a port consultant with TransSystems Corporation. Mr. Vickerman noted that world trade is projected to continue its strong expansion resulting in 6-7 percent annual growth in U.S. container volumes. It will be difficult to match the doubling or tripling of container volumes over the next 20 years with a comparable increase in berths and terminals with land availability a major impediment. Will the U.S. port system be able to expand to meet this demand? How can the anticipated congestion be avoided or managed?

Increasing container vessel sizes pose another challenge to U.S. ports, as are limitations of the Panama Canal, landside access, and intermodal transfer facilities. Port productivity varies significantly between ports with Asian ports leading the way. There may be new technologies that will increase productivity with information technology perhaps the most important. Operational efficiencies such as transshipping containers to feeder vessels and barges might also increase capacity. Mr. Vickerman concluded by cautioning that a failure to make necessary improvements to the U.S. port system will have a significant impact on the country's trading and logistical capabilities.

Jim Brennan
The first speaker was Jim Brennan who directs the maritime and port consulting practice for Norbridge, Inc. He identified six major drivers of port capacity: physical, operational, environmental, security, commercial and financial. Physical elements of port capacity include limitations directed by equipment capabilities, land and waterfront availability, and harbor depths. Operational factors relate to how efficiently physical elements are utilized, while environmental factors

constrain utilization and are growing in importance. Security might ultimately be the most important of all considerations based on recent events with the impact on capacity depending on the nature of new security policies.

Mr. Brennan stated that commercial and financial drivers are often under appreciated and may have had the greatest impact on capacity in recent years. Commercial factors relate to the way the shipping lines behave and the way they decide to use a port terminal. He identified SeaLand's terminal in Hong Kong as a prime example of how capacity can be maximized if the user has berth productivity as a commercial objective. Financial considerations affect capacity by limiting the most efficient utilization of terminals because shippers and carriers are unwilling to pay the premium for service enhancements. If existing port and vessel capacity were better utilized, the high cost of building new mega-ships and mega-ports could be minimized.

Asaf Ashar

The next speaker was Asaf Ashar, Professor-Research for port and intermodal system operations at the National Ports and Waterways Institute of the University of New Orleans. Mr. Ashar noted the adequacy of the national port system depends on both quantitative factors (capacity) and qualitative factors (capability). Capacity issues relate to the amount of infrastructural and equipment components available at port terminals and connections to terminals; capability relates to their size – whether current terminals and connections are appropriate for handling the ships and cargoes they are intended to.

Mr. Ashar identified the key "capacity" elements of a port terminal (berth, yard and gate) and future changes to their use as they affect capacity. New technologies such as automated guided vehicles and new cranes can increase the productivity of berths, while user fees, improved container stacking, and increased use of off-terminal facilities can boost yard and gate capacity. Improvements in port capability will depend on future service patterns as affected by factors such as the expansion of the Panama Canal and increased transshipment and feeder services. He claimed that larger future ships are associated with increasing ship-to-ship transfers (transshipment), suggesting to consider for this purpose floating terminals, based on barges as the vehicle that transfer containers between ships. Less ambitious technology that may dramatically improve productivity is multiple lifting of containers, which is already partially practiced in several foreign terminals, where recent gantry cranes are specified at 72 tons.

Lauren Kotas

Lauren Kotas, the director of marketing and trade development for Port Canaveral, a major cruise port in Florida, was the third speaker. She stated that the cruise business is very profitable and is projected to continue strong growth in the U.S. market. Ports are competing hard to attract cruise services. The cruise industry has port needs that differ significantly from other port users. Although the capacities of the largest cruise ships continue to increase, harbor depth is not a significant problem due to the relatively low drafts of cruise vessels. Capacity requirements for cruise vessels extend well beyond the terminal where passengers are

transferred between ship and shore. Good landside infrastructure is essential. The entire port experience must be friendly, safe, efficient and comfortable to satisfy high-paying vacationers. Off-port infrastructure and services are also important as the cruise experience starts when travelers leave their homes. Adequate airline services and ground transfer services are essential, as is good road access for the large segment of the market that drives to the port.

Other areas of importance to the cruise business include efficient ship provisioning requiring nearby service businesses and adequate dock space for truck transfer. Availability of large volumes of water, handling waste disposal, providing good road signage, and amenities for the large vessel crews are also unique requirements for cruise ships. The security of passengers is vastly more important than that of cargo, and security costs are high as a result. The events of September 11 required an additional $1.2 million for Port Canaveral, four times the amount originally predicted.

Developing facilities and infrastructure for the cruise industry requires long-range planning and requirements for new designs continue to expand. Improved terminal designs, advanced baggage handling systems, and high security landscaped parking lots are examples of recent advances at Port Canaveral. Requirements differ depending on the type of cruise market with vessel size and length of cruise as key considerations. The majority of new ships being delivered are not the mega-vessels, but mostly small-to-medium sized ships (2,100 passengers and less) which are faster and can provide longer voyages. Longer cruises require fewer port calls, but more baggage per person, while also creating more idle time for terminals. In conclusion, when considering increasing needs for port capacity, passenger movement needs should be included in planning, budgeting, and forecasting. Seaports are diversifying their operations beyond cargo in an effort to replace diminishing funding and to "earn their own keep."

Jim McCarville

The final panelist was Jim McCarville, Executive Director of the Port of Pittsburgh and current President of IRPT – the association of inland rivers, ports and terminals. Mr. McCarville noted the importance of political factors in the development of inland waterway capacity. The inland waterway system has an aging infrastructure that is operating at or near capacity, but it must remain viable to support certain key industries and agricultural interests.

The definition of capacity is an important consideration. Seasonal peaking is a key problem with waterway capacity, so average capacity is meaningless for a lock and dam. Operating efficiency is important unless physical capacity can be expanded, and new services such as container-on-barge will create new demands on waterway infrastructure. Political support will be a key factor in developing the required capacity in the future.

PANEL 3 – SECURITY II

MODERATOR
CAPT Anthony Regalbuto, United States Coast Guard

COORDINATOR
Ric Walker, U.S. Coast Guard Research and Development Center

PANELISTS
John McGowan, United States Customs
Keith Seaman, USTRANSCOM
Carl Travato, Philadelphia Regional Port Authority
John R. LaCapra, President, Florida Ports Council
John Lynch, NAVFAC, United States Navy
Raymond Barberesi, Director, Office of Ports and Domestic Shipping, Maritime Administration

SUMMARY OF PANEL PRESENTATIONS / DISCUSSION
The terrorist attacks on 11 September 2001 caused the nation to focus on security issues, making the topic for this conference panel discussion very timely. The moderator, CAPT Anthony Regalbuto, started the discussion by highlighting several important security issues and initiatives within the U.S. Coast Guard to deter and prevent future terrorism -- critical infrastructure protection; port vulnerability assessments; maritime domain awareness; personnel credentials; and chemical, biological, radiological, and nuclear detection. His remarks set the context for identifying technology and research security needs from the USCG perspective. The other panelists outlined their own technology and research needs based on their experiences.

John McGowan
John McGowan serves as the Executive Director of Enforcement Programs of the Office of Field Operations in the United States Customs Service. He is responsible for providing national direction, development and implementation of the Customs Service's programs to interdict contraband in cargo and cargo conveyances entering and departing the U.S. Customs Territory.

Although his agency is responsible for 301 ports of entry (seaports, airports, land-border ports, and inland ports) in the United States, John McGowan focused his presentation on seaports because of the tremendous amount of cargo which moves in/out of these areas. He discussed how the terrorist attacks prompted the U.S. Customs Service to shift its narcotic interdiction capabilities as well as its trade fraud screening capabilities and start looking for different risks and different cargo. U.S. Customs has dedicated considerable effort to combat the new threat of terrorism, applying existing technologies and developing new systems which will allow its agents to better inspect, screen, and track container contents – not just for illegal narcotics, but also now for potential nuclear, biological, radiological, or chemical precursors.

Keith Seaman
Keith Seaman serves as Chief of Concept and Technology Team, Plans and Policy Director of the United States Transportation Command (USTRANSCOM), Scott Air Force Base in Illinois. He is responsible for the USTRANSCOM's Joint Transportation Technology Office.

In his presentation, Keith Seaman provided a Defense Department perspective on transportation and logistics. The national security strategy requires the armed services to rapidly deploy soldiers and equipment worldwide, but the existing military and commercial transportation systems are ill equipped to handle such operations. How can we deploy faster and push equipment through our own commercial industry, which is a little bit more robust than most nations on the other side, and then project force out of this robust transportation capability in the United States into a very minor capability in some of those overseas locations? USTRANSCOM is trying to answer this question as it projects force through the commercial industry today and gets things to the fight. Mr. Seaman opined that there has been little research and development dedicated to improving our transportation capabilities – we must start to invest in these areas now. In doing so, we must be proactive in developing security technology so that we can safely transport our soldiers and equipment. However, this new technology must be non-intrusive, protecting the people in the trenches and yet allowing them to continue with their mission.

Carl Trovato

Carl Trovato serves as the Philadelphia Regional Port Authority (PRPA) as a Director of Operations. He offered an industry perspective on the importance of maintaining a reasonable balance between security and operations – port facilities must implement effective security measures and still facilitate expeditious trade/commerce. These tasks can be accomplished by funding existing security programs and developing new technologies that improve data collection of imported and exported goods and track vessel movements in/out of port. Since 11 September 2001, the PRPA instituted several security measures to prevent future terrorist attacks including the evaluation of its waterfront facility conditions, institution of new identification badges, and analysis of the present port security system.

John LaCapra

John LaCapra is a private attorney with nearly three decades of international business, seaport development, and cruise industry experience. He is President of the Florida Ports Council, a statewide management organization comprising 14 deep-water ports.

He described his organization as a facilitator, taking the tasks that the ports need accomplished as local entities and translating them to both the state and federal system. The events of 11 September prompted the federal government to institute new security measures and deployment plans but these actions cost money. Who will pay? How do we balance security with trade? The interested parties (including state and federal agencies, private industry, the armed services, and law enforcement) must work together and answer these questions. We must rethink how we move freight with the people who still demand better, faster, and cheaper. The needed technology is not new at all – it is shared information, planning, and communication.

John Lynch

John Lynch is a structural engineer working in the Naval Facilities (NAVFAC) Engineering Command,

Engineering Innovation and Critical Office (EICO) located at the Atlantic Division in Norfolk, Virginia. He is responsible for the technical adequacy of all Naval shore facility engineering, design and construction criteria for structural engineering, force protections and physical security, which includes unified facilities criteria and unified facilities guide specifications.

During his presentation, Mr. Lynch briefly discussed his agency's five-phased waterfront security plan to deter, detect, deny, warn, and destroy any potential threats. He unveiled future measures to enhance security for waterfront boundaries and waterfront barriers – expanding communications systems, constructing waterside towers at selected piers, installing multi-level lights, and increasing harbor and landside patrols. In evaluating the required level of security, NAVFAC carefully considers and evaluates these important criteria: type of threat perceived, level of protection required, environmental impacts, and associated costs – initial, maintenance, and operational costs of the equipment.

Raymond Barberesi

Mr. Raymond Barberesi serves as Director of the Maritime Administration's Office of Ports and Domestic Shipping. In his presentation, he spoke about MARAD's responsibilities in the area of port security and how it fits into the MTS and the R&T roles in this forum. He discussed many security issues and initiatives: port security guidance, development of national planning guides and national security program, foreign port security, and port readiness. In developing new technology and initiatives, he stressed the importance of taking a holistic approach and considering the overall transportation system, not just individual parts. The federal agencies need to work together in this effort and share information. However, this technology development and information transfer must be accomplished in such a way that they do not adversely interfere with the commercial marine transportation system – it is not an easy task, but we must balance port security with national security and economic security

PANEL 4 – INTELLIGENT MARINE TRANSPORTATION SYSTEM

MODERATOR
CAPT Jon Helmick, U.S. Merchant Marine Academy

COORDINATOR
Alex Landsburg, Maritime Administration

CHALLENGE SPEAKER
Dr. Ashish Sen, Bureau of Transportation Statistics

PANELISTS
Anne Aylward, EG&G Technical Services at the Volpe Center

Henry Marcus, Massachusetts Institute of Technology

Duncan Wright, CSX Lines

Sandra Borden, Project Manager of the U.S. Coast Guard's Ports and Waterways Safety System

SUMMARY OF PANEL PRESENTATIONS / DISCUSSION
The distinguished panelists that comprised Panel 4 addressed issues related to the development, application, and value added by Intelligent Transportation System (ITS) approaches, concepts, and technologies in the specific context of the Marine Transportation System.

The moderator, CAPT Jon Helmick, began the session by delineating the dimensions of world general cargo trade, the magnitude of containerization, the current challenges of ocean carrier and liner port operation, the needs of commercial and military shippers, and the new imperatives of security that together increasingly drive the adoption of ITS in the MTS.

Dr. Ashish Sen
The challenge speaker was Dr. Ashish Sen who discussed how the events of September 11 gave new meaning for decision-makers to know as much as possible about the marine transportation system as they review and improve security measures. Timely, accurate, and reliable data are critical for decisions on maritime security, just as they are for all other aspects of the transportation system. Dr. Sen then outlined the Bureau of Transportation Statistics (BTS) responsibilities for improving the quality of transportation data, both within the Department of Transportation (DOT) and throughout the transportation community. It is the BTS's firm belief that making better data available to decision-makers will result in more informed decisions. Consequently, they are actively pursuing their mission of becoming the knowledge base for the MTS. They intend to work as partners with the entire maritime community (port operators, maritime agencies, and all levels of government as well as the transporter and shippers in the private sector) to identify the data needs of the 21st century. In these partnerships, they will not only identify data gaps but also collect essential data that are not being collected today and disseminate them widely. By working together, the BTS and their partners can produce higher quality data that can lead to a more secure and productive transportation system. In doing so, they will make

transportation better and improve our lives as well as those of future generations.

Anne Aylward

Anne Aylward of EG&G Technical Services at the Volpe National Transportation Systems Center, focused on lessons learned from experience in the evolution of landside ITS that might have application for the implementation of ITS in the port and maritime realm. She observed that although ITS development has encompassed the idea of intermodal transportation, this consideration has largely excluded marine transportation. Ms. Aylward suggested the need for dissolution of modal and agency "stovepipes" where ITS issues are concerned. In her view, problems in the advancement of ITS are more institutional than technological. Finally, she underscored the need for a coordinated national policy and a predictable funding stream for the development of information infrastructure.

Dr. Henry Marcus

Dr. Henry Marcus of the Massachusetts Institute of Technology discussed intermodal freight container and equipment tagging and tracking. He considered the costs and benefits associated with the use of various technologies that provide in-transit visibility within the supply chain, such as Radio Frequency (RF) and GPS tags. Emphasizing benefits of increased asset utilization, service quality, improved cargo security, and enhanced cargo monitoring capability, Dr. Marcus evaluated key economic issues associated with tagging and tracking devices. Dr. Marcus commented on the interoperability challenge, whereby various users deploy different technologies that are ultimately incompatible. Dr. Marcus concluded his presentation by predicting greater use of automated identification technology in the future, and by noting the need for more research on this topic.

Sandra Borden

Sandra Borden, Project Manager for the U.S. Coast Guard Port and Waterways Safety System, explained the essential mechanics and objectives of Automatic Identification Systems (AIS). She noted that AIS was developed as a means of improving marine collision avoidance, but that the technology has important implications for Vessel Traffic Services (VTS) and maritime security. Ms. Borden discussed the complexity of transponders in general and summarized problems related to a shortage of VHF frequencies to be used for communications of AIS transponder information. She described the process of securing international adoption of proposed U.S. transponder technical standards, and noted the Coast Guard's request to the International Maritime Organization (IMO) for acceleration of the schedule for implementation of worldwide carriage of AIS devices aboard ship. She closed her briefing with the assessment that AIS will prove beneficial for trade, transportation safety, and security.

Duncan Wright

The final panelist, Duncan Wright of CSX Lines, Inc., began by describing the typically fragmented nature of liner service company databases and the operational difficulties that derive from the existence of separate data collection and storage systems for individual business functions. He then discussed

the successful effort by his firm to integrate its disparate databases. Mr. Wright detailed the commercial benefits of this integration, including facilitation of Just-In-Time supply chains, inventory cost reduction, and improved productivity. He emphasized the fact that security is also greatly enhanced by the capability to acquire and process accurate information on the specifics of containerized cargo shipments and those who originate them. Mr. Wright explained the business rules engine that is embedded in the CSX system, which generates alerts based on correlation of such variables as container weights versus manifested contents, shipment origin/destination versus a shipper's historical patterns, and similar data elements. He concluded that much of the information technology being used in global intermodal transportation can be employed for security purposes.

A lively question and answer period followed the presentations, in which the panelists addressed inquiries from the audience concerning specific technologies, uses of information, and examples of ITS applications in the port and maritime environment.

PANEL 5 – COASTWISE TRANSPORTATION

MODERATOR
Paul Bea, Port Authority of New York and New Jersey

COORDINATOR
Tony Furst, Office of Transportation Policy, Department of Transportation

CHALLENGE SPEAKER
Harry Caldwell, Federal Highway Administration

PANELISTS
Bill Ellis, Port Authority of New York and New Jersey

Anatoly Hochstein, National Institute of Ports and Waterways

John Ricklefs, Moffat Nichols

Marc Stanley, Bollinger/Incat

James Wang, Greater Bridgeport Regional Planning Agency

SUMMARY OF PANEL PRESENTATIONS / DISCUSSION
The MTS has played a critical role in helping to close the overall gap between growing transportation demand and the capacity of our transportation infrastructure. Consider these facts: in April 2000, the National Defense Transportation Association's Military Sealift Committee released a report entitled *Maritime Policy Initiatives 2000*, identifying major issues facing the U.S. maritime industry and opportunities for strengthening the industry commercially. One opportunity is coastwise trade. The NDTA analysis found there to be particularly strong growth potential in the market, especially along the I-95, I-10 and I-5 corridors. In these coastal corridors, there is strong evidence of a capacity crunch. The Federal Highway Administration data indicate average annual increases in highway freight miles of 3-4 percent nationally. This will represent a 30-40 percent growth rate by 2010. Existing rail and highway infrastructure cannot handle all of this projected growth. There are obvious limits to how much we can increase the capacity of interstates and rail lines. The waterborne option, on contrast, has underutilized capacity. As vessel and cargo transfer technologies improve and new vessels such as freight ferries come into service, waterborne transportation will provide increasingly competitive service.

The expanded use of waterborne transportation options is not viewed as modal competition. On the contrary, the MTS initiative is seen as part of the cooperative transportation effort to maximize choice and provide a logical alternative to an impending transportation overload.

<u>Harry Caldwell</u>
The challenge speaker was Harry Caldwell who discussed how intermodal trade transport represents an important investment in the nation's future -- it is essential for economic growth and continental security. His presentation focused on two challenges, one technical and the other policy-oriented. He advocated the establishment of a framework for an integrated North American freight data and analytical capability – building a multi-modal investment performance system linked to

related transportation support tools and a strategic planning analysis network that will allow us to think intermodally. He also emphasized the need for policy coordination so that it is possible to maintain an effective and reasonable balance between freight productivity and national security.

Bill Ellis

Bill Ellis is Program Manager at the Port Authority of New York and New Jersey, in the port planning and development section. He talked about the Port Inland Distribution Network (PIDN), which fits within the context of a multi-modal performance system – specifically the coastal, water-based, MTS initiative to add capacity to facilitate and enable economic growth to occur in the nation. The PANYNJ planners envision PIDN as a mass freight transit delivery system from their hub port (a relay system) to Northeast port cities and up the Hudson River. There is a rail component as well. Public benefits include highway construction costs avoidance; transporting large amounts of containers currently moved by trucks and trains; lower emissions; highway congestion mitigation; and the sharing of growth and economic opportunities with other regional ports. Mr. Ellis strongly advocated the use of new technology in order to add value to the services offered and to drive down costs. They are currently still planning the system. They estimate it will be 3-5 years to start the services, not at every location but probably 2-3 barge ports and one or two rail locations. They will build on those successes and expand to new inland destinations, replicating the models that exist in Europe.

James T. Wang

James Wang is Executive Director of the Greater Bridgeport Regional Planning Agency, Connecticut. For his presentation, James Wang focused on the issues, planning, funding, implementation, process, and politics required to build a container feeder port for Bridgeport, Connecticut. Bridgeport would be connected to the PIDN service described by Mr. Ellis. Mr. Wang also pointed out that the container service by barge in New England states failed in the past 25 years without operational assistance from public sources. The Bridgeport project will use federal/state funds to stimulate such operations similar to public transit services.

Anatoly Hochstein

Anatoly Hochstein is Director and Professor of the National Ports and Waterways Institute, associated with the University of New Orleans. In his presentation, Anatoly Hochstein introduced a concept, which addresses coastwise shipping of freight, including both domestic trailers and international containers. Moving the containers by high speed Ro/Ro ferries along most congested coastal highways make this type of service compatible and competitive with traditional domestic land transportation. The concept envisions a series of ferry terminals along the coast, outside, although desirably adjacent, of ports serving international trade. Such terminals need not be of large size and could offer considerably lower costs for construction and operation. If implemented, this concept would be beneficial for increasing the volume and functions of domestic water transportation as well as overall national intermodal system. Benefits include relieving highway

congestion; contributing to better environment; developing a reserve of craft and mariners for mobilization during emergencies; and providing more flexibility and security to the entire transportation system. He stressed that it is not intended to compete with the trucking industry but rather serve this industry, increasing the truck sector's intermodal options to deliver goods with the same frequency and delivery time.

John Ricklefs

John Ricklefs is a consultant for the Port Authority of New York and New Jersey's Port Inland Distribution Network (PIDN) project. He gave a presentation on the Port of Davisville and its potential functions within the PIDN system. In doing so, he highlighted several important issues: time, empty container management, chassis management, and value-added services.

Marc Stanley

Marc Stanley serves as Executive Vice President of Bollinger Shipyard for government and international affairs. His company constructs fast ferry vessels and sees the potential for moving freight on fast vessels of similar design. During his presentation, he discussed displacement vessel design from a shipbuilder's perspective. Ship length, geographic location, weather problems, and waterway restrictions are several factors considered in designing a ship for high-speed coastwise transportation. He then provided some specifications and information on a vessel that his company recently leased to the U.S. Army and U.S. Navy. This 112-meter craft can carry one thousand tons at 40 knots for 1000 miles. It features a high-speed wave-piercing platform, which is stable in fairly severe sea states, adaptable to extreme port conditions, and operates in water depths of 12 feet.

PANEL 6 – MTS USER NEEDS

MODERATOR
Jeff High, U.S. Coast Guard

COORDINATOR
Bruce Parker, National Ocean Service, NOAA

PANELISTS
Glenn Ashe, American Bureau of Shipping

Jonathan Benner, INTERTANKO

Barry Holliday, U.S. Army Corps of Engineers

Peter Lehman, American Association of Port Authorities (South Carolina State Ports Authority)

Leo Penne, American Association of State Highway and Transportation Officials

Mike Watson, American Pilots Association

Chuck Carroll, National Association of Waterfront Employers

Ed Mortimer, U.S. Chamber of Commerce

Ed Welch, Passenger Vessel Association

SUMMARY OF PANEL PRESENTATIONS / DISCUSSION
The theme of this year's conference was "Meeting the Needs of the Marine Transportation System Through Research and Technology" and thus, user needs were discussed in all the panels and technical sessions to some extent. However Panel 6, the final panel of the conference, was devoted exclusively to MTS user needs. The nine panelists represented the entire breadth of the MTS, and each provided insights into some of the needs within their particular sector.

Glenn Ashe
Glenn Ashe is the Director of Government Operations for the American Bureau of Shipping (ABS) and heads their Government Operations Office in Alexandria, Virginia. His presentation focused on marine safety and environmental stewardship which, from his perspective, hinges on the establishment of a process whereby the acceptability of assets (such as a ship or port) can be measured against an accepted set of standards. This system would provide a baseline for them to fulfill safety and environmental stewardship obligations to the public at large while still being assured that competitive advantage will not be garnered by someone who does not. Research and technology are two important drivers behind standards development for such a process. Organizations such as ABS are strongly committed to research and technology, making sure that they can provide the industry with the tools they need to make these measurements and meet standards. As technology progresses, such efforts must focus on risk-informed or risk-based methods in order to maximize both cost and technical effectiveness.

Jonathan Benner
Jonathan Benner is a Partner with the Washington office of Trout and Sanders. He represents INTERTANKO, the

International Association of Independent Tanker Owners. He presented a list of wants/needs that his organization would like to see. These needs include improved navigational charts and displays; competence assurances for transportation personnel; safe berths and terminals for tankers; better traffic management systems and information systems for vessel masters; increased communications between government agencies; and MTS standards and requirements uniform to other countries. He admits that these needs are parochial, but they contribute to promote national interests, security, and commercial success, both for vessels and for the commerce of the United States.

Barry Holliday

Barry Holliday is the Chief of the Navigation and Operations Branch in the Operations Division in the headquarters of the U.S. Army Corps of Engineers (USACE). The MTS is an integral part of the issues surrounding the environment and the impacts on developing the viable waterborne transportation system, one of USACE's main responsibilities. There are many sediment issues associated with MTS and in dealing with them, USACE is expected to generate responses/solutions which are both economically beneficial and environmentally sustainable. To meet these challenges, it is necessary to develop management solutions that consider economic and environmental impacts. We need research and technology that focuses on long-term morphological models, in scales not studied previously, and then create companion environmental efforts and response models. We also need to better leverage other agencies' technology, research, or other applications, in order to improve future efforts. Despite the many challenges ahead, USACE remains committed to its mission of maintaining a viable federal infrastructure to support the future MTS.

Peter Lehman

Peter Lehman is Director of Planning and Business Development at South Carolina State Ports Authority. In his presentation, he offered some talking points on capacity, congestion, and security needed to create an efficient transportation system. In a May 2000 study, the issues of port access and intermodal connections and intermodal transportation planning/system capacity analysis were identified as the top priorities for American ports. Since the terrorist attacks, the top issue would probably be how to enhance seaport security without impeding the flow of commerce. Mr. Lehman maintained that we must balance security with efficiency and productivity. In doing so, we must view the transportation system as a whole entity that is only as efficient as its weakest member. Despite events of 11 September, his organization remains committed to the MTS goal of creating by 2020 the world's most advanced, secure, and efficient system for moving goods and people.

Leo Penne

Leo Penne is the Program Director for the intermodal and industry activities with the American Association of State Highway and Transportation Officials (AASHTO). Mr. Penne's presentation revolved around AASHTO's transitioning view of the transportation business as one system. His organization, in trying to engage with the congestion capacity problem in its traditional area of responsibilities – the

highways – is becoming intermodal and in doing so, it is incorporating the marine transportation system into its vision for nation's future transportation system. He identified connectors and corridors as two areas that will require transportation research and technology development.

Mike Watson

Mike Watson serves as President of the American Pilots Association (APA). In his presentation, he noted that implementation of navigation technologies holds great promise as an important piece to publicize our desire vision for the MTS. The APA continues to dedicate its resources and expertise to be a strong advocate for the application of technology such as GPS and the increased availability of differential global positioning systems. Accelerating the development and delivery of these navigation technologies is critical to our ability to move our country's increasing waterborne commerce safely and efficiently. We must note that there is danger in not recognizing the limitations of technology. With the challenges facing MTS, perhaps even more importantly with the recent realization of our industry's vulnerability to terrorism, this country needs to reconsider its national security and economic interests.

Chuck Carroll

Chuck Carroll is an attorney and the Executive Director and General Counsel for the National Association of Waterfront Employers. Mr. Carroll talked about the impact of the 11 September attacks on infrastructure. The federal government has placed increased demands, both statutory and regulatory, on the maritime industry to provide information such as container content documentation and personnel credentials. It is imperative, as a matter of technology and research, that we can interchange computer databases between the private sector and government. The federal government should take the initiative to develop and implement a system needed to share this information. In this way, agencies can make informed, sensible decisions to ensure the security of the ports and national transportation system.

Ed Mortimer

Ed Mortimer is the Senior Manager of the Transportation Infrastructure Department at the United States Chamber of Commerce, where he is responsible for transportation policy. During his presentation, he voiced his agency's concern about the future of our marine transportation system. Based on data from the Department of Transportation, the amount of freight entering this country will double by the year 2015. This increase will only exacerbate the current capacity crisis in our nation's ports and inland waterways. The U.S. Chamber of Commerce is actively involved in addressing this problem. They recently conducted a study to look at sixteen port areas around the country, looking at the current infrastructure and freight loads and then formulating ideas what to do when the amount of freight doubles in 2015. The U.S. Chamber of Commerce also organized broad coalitions --comprised of representatives from the business community, state and local governments, and transportation users and providers – to press Congress for money and economic stimulus packages. There is no way better to improve our economy than by providing a better infrastructure

system so we can move our freight and improve the mobility of our people.

Ed Welch

Ed Welch spoke in his capacity as Legislative Director for the Passenger Vessel Association, expressing his organization's interest in data collection and vessel emissions. He recommended that the government and maritime industry expand their efforts to collect good data about the domestic passenger vessel service. This data must be continually updated and refined on a regular basis. The better data will help the interested parties to determine what is the appropriate role of domestic passenger vessels and ferries within the MTS. Mr. Welch also advocated for more research funds to quantify vessel emissions and determine ways to reduce such pollutants. He concluded his presentation by talking about security, how ferries and domestic passenger vessels serve as valuable emergency assets during catastrophes but they are extremely vulnerable, given the large volume of passengers and cargo that they handle.